AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-11 (cancelled)

Claim 12 (currently amended): ~~A~~An isolated and/or purified nucleic acid sequence encoding ~~the fusion protein of claim 6~~ a fusion protein comprising at least one target peptide linked to a fusion carrier protein, the fusion carrier protein consisting of an amino acid sequence as set forth in SEQ ID NO: 14.

Claim 13 (currently amended): An expression vector comprising the nucleic acid sequence of claim 12, operably linked to a promoter for expression of said nucleic acid sequence coding for the fusion protein.

Claim 14 (original): The expression vector of claim 13, wherein the promoter is pL promoter, λ promoter, trc promoter or T7 promoter.

Claim 15 (previously presented): A host cell transformed with the expression vector of claim 13.

Claim 16 (original): The host cell of claim 15, wherein said host cell is E. coli DH5α, BL21, JM101 or JM105 or NM522 or N99CI+.

Claim 17 (original): The host cell of claim 15, wherein said host cell is from E. coli or B. subtilis.

Claim 18 (original): The host cell of claim 15, wherein said host cell is a yeast.

Claim 19 (previously presented): A method for producing a fusion protein comprising the step of culturing the host cell as defined in claim 15 under suitable conditions for expression of the expression vector, thereby producing a fusion protein.

Claim 20 (currently amended): The method of claim 19, wherein ~~the suitable conditions comprises an inducer for inducing~~ the host cell is induced by an inducer to express the ~~espression~~ expression vector.

Claim 21 (currently amended): The method of claim 20, wherein the inducer is IPTG, nalidixic acid or a temperature suitable for inducing expression of the vector.

Claim 22 (previously presented): The method of claim 19, further comprising a step of purification of the fusion protein produced.

Claim 23 (original): The method of claim 22, wherein the step of purification comprises at least one of alcohol precipitation, ion-exchange, and affinity purification using Ni-agarose resin.

Claim 24 (currently amended): The method of claim 19, wherein the fusion protein is further subjected to a ~~proteolylic~~ proteolytic digestion to release the target peptide from the fusion protein.

Claim 25 (currently amended): The method of claim 24, wherein the ~~proteolitic~~ proteolytic digestion is achieved by CNBr, formic acid or HCl.

Claim 26 (currently amended): The method of claim 24, wherein the ~~proteolitic~~ proteolytic digestion is achieved by thrombin, or a protease.

Claim 27 (original): The method of claim 26, wherein the protease is an enterokinase.

Claim 28 (previously presented): The method of claim 24, wherein the target peptide released is further purified by HPLC.

Claims 29-32 (cancelled)

Claim 33 (new): The nucleic acid sequence of claim 12, wherein the at least one target peptide is selected from the group consisting of eCla4, eCla5, hirudin, mCla4, mSte20, cCla4, cSte20, FpA, FN22, propeptide of human Cathepsin B, PTH and EphrinB, or fragments thereof.

Claim 34 (new): The nucleic acid sequence of claim 12, wherein the fusion protein comprises a peptidic cleavage site between the at least one target peptide and the fusion carrier protein.